REMARKS

By this Amendment, claims 1-5 and 8 are amended. Reconsideration based on the above amendments and the following remarks is respectfully requested.

I. The Claims Satisfied the Requirements under 35 U.S.C. §112

The Office Action rejects claims 2 and 8 under 35 U.S.C. §112, second paragraph as indefinite. Claims 2 and 8 are amended to obviate the rejection according to the Examiner's suggestions. Accordingly, withdrawal of the rejection under 35 U.S.C. §112, second paragraph, is respectfully requested.

II. The Claims Define Allowable Subject Matter

The Office Action rejects claims 1, 3-5, and 7-14 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent 6,081,171 to Ella in view of U.S. Patent 6,106,735 to Kurle et al. ("Kurle"). This is rejection is respectfully traversed.

Ella and Kurle, taken separately or in combination, do not disclose, teach or suggest "the BARs of the first wafer are aligned with the wells of the second wafer" and "separating individual filters," as recited in claim 1 from which claims 3-5 and 7-14 directly or indirectly depend.

Ella discloses a method of manufacturing a multi-pole BAWR-SCF device including two bulk acoustic wave resonators (BAW1, BAW2) and a stacked crystal filter (SCF4) (Figs. 20a-20c). Page 3 of the Office Action concedes, "Ella does not disclose that the second wafer has a plurality of wells." Therefore, the Office Action asserts that Kurle teaches a second wafer having a plurality of wells.

Kurle discloses a wafer stack with sensor elements, which are hermetically sealed. Further, the Office Action asserts, "Kurle teaches that wells are not required and that a useful alternative to a second wafer with wells is to use a second wafer without wells (col. 4, lines 19-20)."

As conceded in the Action, Kurle does not require wells in a wafer because Kurle relates to hermetically sealing sensor elements. Kurle does not disclose, teach or suggest "bulk acoustic resonators (BARs)," as recited in claim 1. Since Kurle discloses fabricating sensor elements and Ella discloses bulk acoustic wave resonators (BARs), it would not have been obvious to one with skill in the art to combine Kurle with Ella.

Moreover, when a second wafer without wells is used, the BARs of the first wafer come in contact with the second wafer, and as a result, a mass load to change the resonant frequency of the BARs will be exerted on the BARs. In contrast, when the second wafewr has wells and the BARs of the first wafer are aligned with the wells of the second wafer, no such mass load is exerted on the BARs because the BARs are not in contact with the second wafer. Therefore, to hermetically seal the bulk acoustic resonators, a second wafer without wells cannot be substituted for a second wafer with wells. Since Kurle indicates that the wafer with wells and a wafer without wells are interchangeable, one with ordinary skill in the art would not have been motivated to combine Kurle with Ella. Therefore, withdrawal of this rejection is respectfully requested.

Claims 1-14 are rejected under 35 U.S.C. §103(a) as unpatentable over Ella in view of Kurle and U.S. Patent 6,062,461 to Sparks et al. ("Sparks"). This rejection is respectfully traversed.

Ella, Kurle, and Sparks, taken separately or in combination, do not disclose, teach or suggest "the BARs of the first wafer are aligned with the wells of the second wafer " and "separating individual filters," as recited in claim 1 from which claims 3-14 directly or indirectly depend.

Ella, Kurle, and Sparks, taken separately or in combination, do not disclose, teach or suggest "said wells being aligned with said FBAR filters" and "filters being separated," as recited in claim 2.

The Office Action concedes that Ella does not disclose a wafer having a plurality of wells. Further, the Office Action concedes, "Kurle does not teach how the wells are formed." Therefore, the Office Action asserts that Sparks teaches that wells can be formed on a wafer by etching (col. 5, lines 1-2 of Sparks).

Sparks discloses a method by which semiconductor wafers can be solder bonded to form a semiconductor device such as a senor with a micromachined structure 14. Sparks does not disclose, teach or suggest "bulk acoustic resonators (BARs)" as recited in claim 1 or "film bulk acoustic resonators (FBARs)," as recited in claim 2. Further, Sparks does not disclose, teach or suggest "separating individual filters" as recited in claim 1 and "the individual filters being separated after the wafers have been processed" as recited in claim 2. Since neither Sparks or Kurle disclose, teach or suggest "bulk acoustic resonators" or "film bulk acoustic resonators" as recited in the claims, one with skill in the art would not have motivated to combine Ella with Kurle and Sparks. Accordingly, withdrawal of this rejection is respectfully requested.

For at least these reasons, it is respectfully submitted that independent claims 1 and 2 are distinguishable over the applied art. The remainder of the claims depend from independent claim 1 are likewise distinguishable over the applied art for at least the reasons discussed above, as well as for the additional features they recite.

III. Conclusion

For at least these reasons, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-14 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the Applicants' attorney at the telephone number listed below.

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Date: December 31, 2003

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